

Georgia Department of Natural Resources

205 Butler Street, S.E., East Floyd Tower, Atlanta, Georgia 30334

Lonice C. Barrett, Commissioner
Harold F. Reheis, Director
Environmental Protection Division
(404) 656-3094

June 29, 1995

FILE COPY

Mr. R. Lewis Shaw
Deputy Commissioner
South Carolina Department of Health and Environmental Control
2600 Bull Street
Columbia, SC 29201

Dear Lewis:

The purpose of this letter is to document the agreements that Georgia EPD and South Carolina DHEC reached during our meeting in Atlanta on June 20, 1995, regarding salt-water encroachment in the Hilton Head - Savannah area. Here is our understanding of what both agencies agreed to do over the next six months :

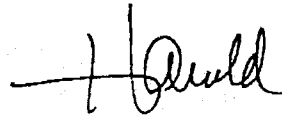
- 1) Georgia EPD will conduct public hearings/meetings and will develop a Coastal Groundwater Management Strategy.
- 2) Georgia EPD will define an interim target number for pumpage reductions for Savannah / Chatham County (or equivalent). The actual reductions in pumpage may not necessarily be in the Savannah / Chatham County area; but the target number will be 'potentiometrically equivalent' to a certain reduction in Savannah / Chatham County.
- 3) Georgia EPD will begin implementing the target reductions as soon as possible and all target reductions will be fully implemented within 10 years. During the ten year time frame Georgia EPD will continually reassess the hydrogeologic conditions of the aquifer and modify / update the Coastal Groundwater Management Strategy. On the basis of any new information, additional reductions in groundwater withdrawals may be necessary.
- 4) Georgia EPD will query all permitted industrial groundwater users in coastal Georgia to identify those facilities that use groundwater for non-contact cooling water. Such facilities will be considered as candidates for reinjection.
- 5) Georgia EPD will review all groundwater withdrawal permits to determine those with excess capacity, and then seek voluntary reductions in that permitted capacity.
- 6) Georgia EPD will look for opportunities to use treated wastewater, alternate aquifers and ponds to irrigate golf courses.
- 7) Georgia EPD will complete our assessment of groundwater models.
- 8) South Carolina DHEC and Georgia EPD will jointly identify locations for future monitoring wells in the northern Hilton Head area. Representatives from Chatham County will be invited to participate in this process.
- 9) South Carolina DHEC will develop estimates of groundwater use in the Floridan aquifer for approximately 13 counties in the southern portion of South Carolina.

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- 10) South Carolina DHEC will provide a written explanation of the method by which Hilton Head will reduce their groundwater withdrawals from their previous 14.5 mgd pumpage to about 9.8 mgd.
- 11) South Carolina DHEC will host a meeting in the Beaufort - Jasper county area of South Carolina, where Georgia EPD can explain some of the things being done to resolve the problem of salt water encroachment.
- 12) South Carolina DHEC and Georgia EPD will meet in December, 1995 to discuss Georgia's Coastal Groundwater Strategy. At that meeting, Georgia EPD will provide the interim target number for pumpage reductions in Savannah / Chatham County (or equivalent).

Please review the above items and let me know if they are consistent with your understanding of our June 20th agreements.

Sincerely;



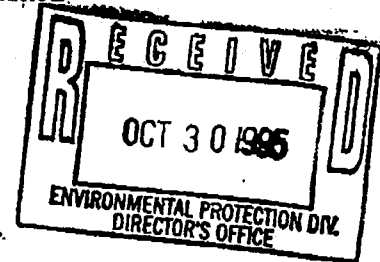
Harold F. Reheis
Director

cc. Nolton Johnson
William McLemore
Bill Frechette

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ENVIRONMENTAL QUALITY CONTROL

October 25, 1995



Mr. Harold F. Reheis, Director
Georgia Department of Natural Resources
Environmental Protection Division
205 Butler Street, S.E.
East Floyd Tower
Atlanta, Georgia 30334

Dear Mr. Reheis:

At our meeting on June 20, 1995, the South Carolina Department of Health and Environmental Control (DHEC) and the Georgia Environmental Protection Division (EPD) reached a tentative agreement to implement a ten year program to jointly develop a strategy for addressing groundwater quality and quantity problems in the Floridan aquifer. DHEC's agreement to participate in a ten year program was contingent upon EPD considering a 12 to 15 million gallon per day (Mgd) reduction from users in Chatham County or equivalent. The request for a good-faith reduction as part of the ten year program compliments serious conservation efforts already implemented in South Carolina. As outlined in your letter of June 29, 1995, the Georgia Environmental Protection Division is to define an interim target number in December 1995 for a groundwater reduction in Chatham County (or equivalent) and begin implementing the reduction as soon as possible in order to avoid legal action by the State of South Carolina.

Recently, Chatham County officials completed a comprehensive 30 year water supply plan that will involve a major restructuring of their water supply system with an emphasis on conservation and alternative water sources. The opportunity is now available for Chatham County to improve conditions affecting the rate of saltwater intrusion by implementing a water supply infrastructure less dependent on groundwater pumpage. However, according to our tentative agreement, Chatham County's water supply plan must have sufficient flexibility to accommodate changes as new data is made available through the proposed 10 year program. Otherwise, further modifications involving conservation and groundwater reductions could become more difficult to implement in the future.

It may be technically and economically advantageous for the Georgia EPD to target a 20 Mgd reduction in Chatham County within the 10 year process. The benefits of a 20 Mgd reduction in Chatham County has been studied in various groundwater models constructed by our respective States. At this time, no model has won unanimous support. However, The South Carolina Department of Natural Resources was represented at our interstate meeting on October 26, 1995. As part of their participation, they prepared a draft report entitled, "Review of the Savannah Area Model." The map (enclosed) on page five of this report uses measured USGS data from 1959 to illustrate how the potentiometric surface of the Floridan aquifer responded in South Carolina per million gallons pumped in Chatham County (Hilton Head Island and

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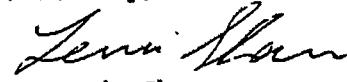
surrounding areas were undeveloped). Using this data, a 20 Mgd reduction in Chatham County would increase water levels in South Carolina approximately 20 feet in southern Jasper County to possibly one foot at the north end of Hilton Head Island.

To fully evaluate the benefits of reducing 20 Mgd from the Floridan aquifer in Chatham County or equivalent, we must also consider the effects of reductions in progress by Hilton Head Island and future reductions that may occur elsewhere as part of the Georgia Coastal Groundwater Strategy. There is reason to believe that the combined reductions could raise water levels on the north end of Hilton Head Island by approximately 2.5 feet. In terms of controlling the rate of saltwater intrusion, a water level rise of several feet on the north end of Hilton Head Island is critical and would gain valuable time for other options to be addressed.

In summary, South Carolina's interim request for Chatham County to reduce groundwater pumpage by 12 to 15 Mgd was clearly intended to be a minimum reduction. The technical data strongly support the need for a greater reduction to insure that the rate of saltwater intrusion will remain manageable for future generations. A larger commitment to reduce groundwater on behalf of water users in Chatham County will offer greater security and continue the standard set by Hilton Head Island as we proceed with the ten year program. This pattern will encourage other water users to implement serious conservation programs and move forward with alternative sources for water supply. With adequate time, it may be possible for our technical staffs to develop other strategies, such as injection of surface water in Chatham County, to raise water levels and thereby preclude the need for additional groundwater reduction.

I am aware that the complexity of balancing reductions for existing groundwater allocations while simultaneously planning for continued demand will require considerable communication with Georgia water users. Please be assured that the Department of Health and Environmental Control will continue to cooperate and work with the Georgia EPD to develop a safe and dependable source of water supply.

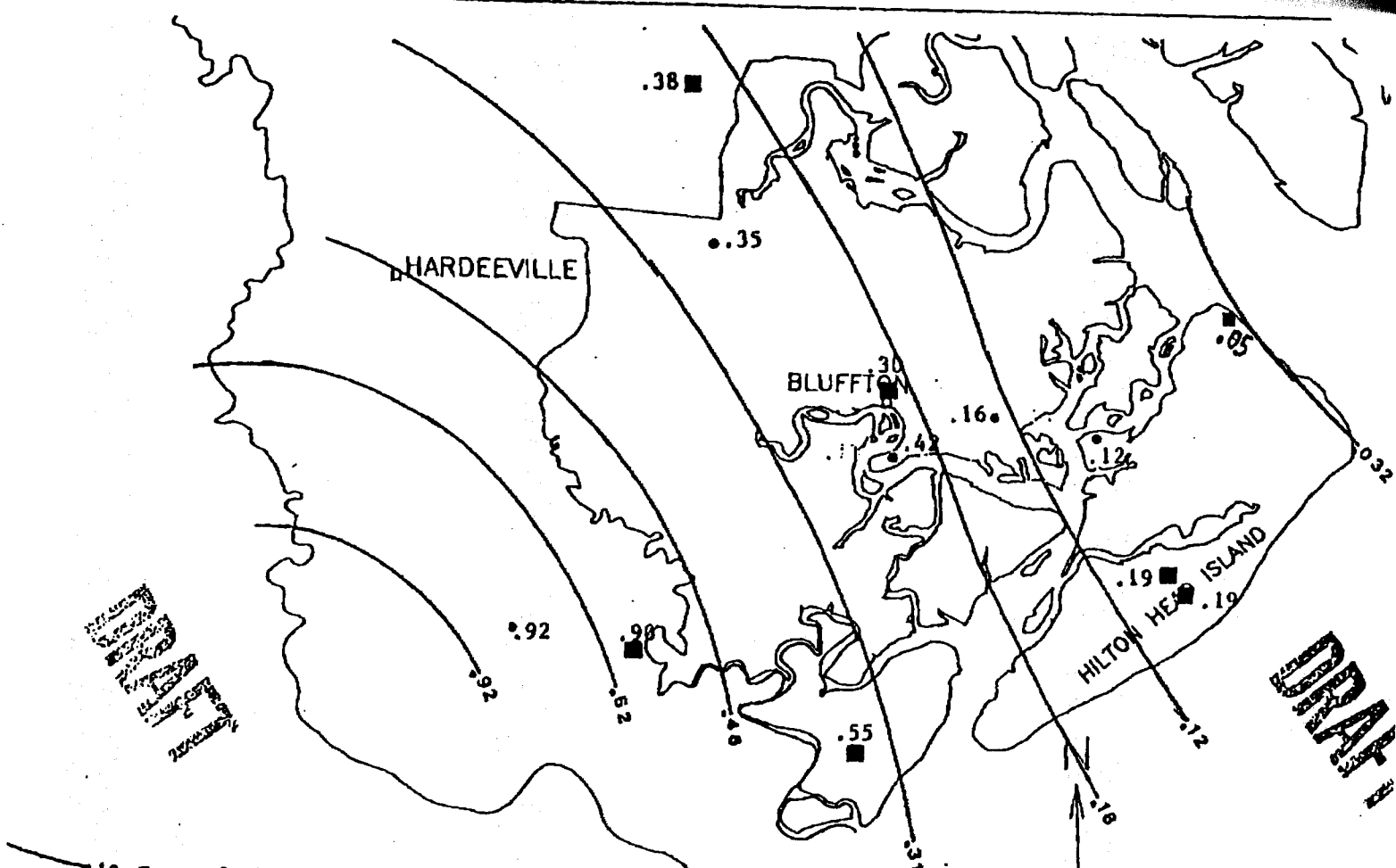
Sincerely,



R. Lewis Shaw
Deputy Commissioner

RLS/cr
Enclosure

cc: Bob Malpass
Joe Rucker
Camille Ransom



- .12 Feet of change per Mgd change at Savannah, Georgia (Garza & Krause, plt 14)
- .30 ■ Feet of change per Mgd change measured between 1941 & 1959 or 1954 & 1959
- .12 ● Feet of change per Mgd change from 1957 or 1958 measurements and estimated predevelopment surface (Garza & Krause, plt 1)

